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Application No. 10/540,017
Amendment dated July 9, 2007
Reply to Office Action of February 7, 2007

Docket No.: 4005-0261PUS1

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1 and 2 are currently being prosecuted. The Examiner is respectfully requested to reconsider his rejections in view of the amendments and remarks as set forth below.

Rejection Under 35 U.S.C. § 103

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as being obvious over Boyd (U.S. Patent 3,792,390). This rejection is respectfully traversed.

The Examiner states that Boyd shows an electromagnetic actuator with an actuator member 60 movable under the effect of a resilient member 84 and coil 42 and at least one permanent magnet 26 arranged to hold the actuator member in at least one position. The coil is associated with a core having two portions 12 and 30 with first facets in contact with the permanent magnet and second facets that present an airgap 31. The Examiner admits that Boyd does not show a valve actuator but believes that one of ordinary skill in the art would use this arrangement for a valve actuator.

Applicant submits that claim 1 as presently amended is not anticipated by or obvious over this reference. Applicant have modified claim 1 to add an additional limitation at the end of claim 1. Claim 1 now states that the permanent magnet is in contact with the first facets over substantially an entire surface of the first facets. This is seen in Figure 1 of the present application where permanent magnet 22 and first facet 21 have a common surface that extends horizontally along substantially the entire length of the first facet.

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Applicant submits that the Boyd reference does not show this feature. Boyd shows a permanent magnet 26 which is annular in form and which abuts at its top and bottom surfaces two portions of the core indicated as pole piece 30 and base member 12. As seen in Figure 1 of the reference, the top of the permanent magnet extends only about half of the width in the radial direction of the first facet of pole piece 30. Likewise, a similar dimension is found laterally between permanent magnet 26 and base member 12. In view of this, Applicant submits that the claim as amended is not obvious over this reference.

The consequence of this arrangement is that in Boyd, the distance between the facets (i.e., the height of the permanent magnet) must be greater than in the present application. This causes the overall dimensions of the actuator to be greater, which is an important feature used in a camless engine.

In view of the above, Applicant submits that claim 1 is allowable. Claim 2 depends from claim 1 and, as such, is also considered to be allowable. In addition, this claim further specifies that the paragraph forms a right angle with the direction of magnetization of the permanent magnet. Accordingly, this claim is additionally allowable.

Conclusion

In view of the above remarks, it is believed that the claims clearly distinguish over the patent relied on by the Examiner. In view of this, reconsideration of the rejection and allowance of all of the claims are respectfully requested.

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Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert F. Gnuse, Reg. No. 27,295, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

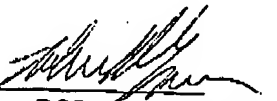
Dated: July 9, 2007

Respectfully submitted,

By

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